

AMENDMENTS TO THE SPECIFICATION:

Please amend the specification as follows:

At pages 7-8, bridging paragraph:

Bearing the above object in mind, according to a first aspect of the present invention, there is provided an equalizer for equalizing a detection signal obtained by detecting a reception transmission signal with periodically inserted known symbol patterns made up of at least one symbol, the apparatus comprising: symbol pattern synchronizing means for reproducing symbol timing by detecting the symbol patterns based on the detection signal; equalizing means for acquiring an equalization signal by multiplying signals extracted from the detection signal at predetermined intervals and weights; symbol pattern generating means for generating a reference signal equal to the symbol pattern; error calculating means for acquiring an equalization error by subtracting the equalization signal from the reference signal; and weight updating means for updating the weights based on the detection signal and the equalization error at the timing of the symbol pattern.

At pages 8-9, bridging paragraph:

According a second aspect of the present invention, there is provided a receiver for carrying out diversity receiver for a reception transmission signal with periodically inserted known symbol patterns made up of at least one symbol, the apparatus comprising: a plurality of antennas for receiving the reception transmission signal; a plurality of detecting means for carrying out quadrature detection on the reception signals from the corresponding antennas; a plurality of equalizers for carrying out equalization using the outputs of the corresponding detecting means; selecting means for selecting the outputs of the plurality of equalizers; and

data decision means for deciding data based on the output of the selecting means, wherein each of the plurality of equalizers comprises: symbol pattern synchronizing means for reproducing symbol timing by detecting the symbol patterns based on the output signals of the detecting means; equalizing means for acquiring an equalization signal by multiplying signals extracted from the detection signal at predetermined intervals and weights; symbol pattern generating means for generating a reference signal equal to the symbol pattern; error calculating means for acquiring an equalization error by subtracting the equalization signal from the reference signal; and weight updating means for updating the weights based on the detection signal and the equalization error at the timing of the symbol pattern.

At pages 9-10, bridging paragraph:

According to a third aspect of the present invention, there is provided a receiver for carrying out diversity receiver for a reception ~~transmission~~ signal with periodically inserted known symbol patterns made up of at least one symbol, the apparatus comprising: a plurality of detecting means for carrying out quadrature detection on the reception signals from the corresponding antennas; symbol pattern synchronizing means for reproducing symbol timing by detecting the symbol patterns based on the plurality of detection signals; one or more equalizing means for acquiring equalization signals by multiplying signals extracted from the outputs of the corresponding detecting means at predetermined intervals and weights; combining means for combining the outputs of the plurality of equalization signals; symbol pattern generating means for generating a reference signal equal to the symbol pattern; error calculating means for acquiring an equalization error by subtracting the equalization signal from the reference signal; one or more weight updating means for updating weights based on the corresponding detection signals and the corresponding equalization errors at the timing of

the symbol pattern; and data decision means for deciding data based on the output of the combining means.

At pages 10-11, bridging paragraph:

According to a fourth aspect of the present invention, there is provided an equalization method for carrying out equalization processing, comprising: a step of equalizing a detection signal obtained by detecting a reception ~~transmission~~ signal with periodically inserted known symbol patterns made up of at least one symbol; and a step of detecting a symbol synchronization position by detecting the symbol patterns based on the detection signal, wherein equalization processing is carried out based on weights updated when the synchronization position of the detection signal is detected, whereas equalization processing is carried out without weight updating when the synchronization position of the detection signal is not detected.

At pages 11-12, bridging paragraph:

According to a fifth aspect of the present invention, there is provided a reception method for carrying out diversity receiver for a reception ~~transmission~~ signal with periodically inserted known symbol patterns made up of at least one symbol, the method comprising: a reception step of receiving the reception ~~transmission~~ signal by a plurality of antennas; a detecting step of carrying out quadrature detection on received signals from the corresponding antennas using a plurality of detecting means; a plurality of equalizing steps of carrying out equalization using the outputs of the corresponding detecting means; a selecting step of selecting processing results obtained by the plurality of equalizing steps corresponding to the plurality of detecting means; and a deciding step of deciding data based on the selected processing result, wherein each of the plurality of equalizing steps comprises:

a step of equalizing a detection signal obtained by detecting a transmission signal with periodically inserted known symbol patterns made up of at least one symbol; and a step of detecting a symbol synchronization position by detecting the symbol patterns based on the detection signals, wherein equalization processing is carried out based on weights updated when the synchronization position of the detection signal is detected, whereas equalization processing is carried out without weight updating when the synchronization position of the detection signal is not detected.

At page 12, second full paragraph:

According to a sixth aspect of the present invention, there is provided a reception method for carrying out diversity receiver for a reception ~~transmission~~ signal with periodically inserted known symbol patterns made up of at least one symbol, the method comprising: a step of receiving the reception ~~transmission~~ signal by a plurality of antennas; a step of carrying out quadrature detection on received signals from the corresponding antennas using a plurality of detecting means; and a step of detecting a symbol synchronization position by detecting the symbol patterns based on the plurality of detection signals, wherein equalization processing is carried out based on weights updated when the synchronization position of the detection signal is detected, whereas equalization processing is carried out without weight updating and the respective outputs of equalization processing are combined with each other when the synchronization position of the detection signal is not detected.

At pages 12-13, bridging paragraph:

According to a seventh aspect of the present invention, there is provided a reception method for carrying out diversity receiver for a reception ~~transmission~~ signal with periodically inserted known symbol patterns made up of at least one symbol, the method

comprising: a step of receiving the reception ~~transmission~~ signal by a plurality of antennas; a step of carrying out quadrature detection on received signals from the corresponding antennas using a plurality of detecting means; a step of detecting a symbol synchronization position by detecting the symbol pattern based on detection signals output from the plurality of detecting means, wherein equalization processing is carried out based on weights respectively updated when the synchronization position of the detection signal is detected, whereas equalization processing is carried out without updating of respective weights and the respective outputs of equalization processing are combined with each other when the synchronization position of the detection signal is not detected.